

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Product form Filament
Trade name Composite Steel PLA
Product code SSP1xxxx

1.2 Relevant identified uses of the substance or mixture and uses advised against

For use in 3D printers at recommended temperatures

1.3 Details of the supplier of the safety data sheet

Proto Plant
12001 NE 60th Way, B-2
Vancouver, WA 98682
www.protopasta.com

Emergency telephone number: 503-877-5268

Section 2: Hazards identification

2.1 Classification of the substance or mixture

No classified

2.2 Label elements

No labeling applicable

2.3 Other hazards

No additional information applicable

2.4 Unknown acute toxicity (GHS US)

Not applicable

Section 3: Composition/Information on ingredients

3.1 Substances/Mixtures

Chemical Name	CAS No	Weight %
Poly lactide resin	9051-89-2	39
316L Steel	65997-19-5	60
Other polymers		1

Section 4: First-aid measures

4.1 Description of first-aid measures

First-aid measures after

Inhalation Move to fresh air. If irritation persists, seek medical attention.

Skin contact Wash with soap and water. For thermal burns, immediately flush with cold water. Do not attempt to remove polymer from skin. Obtain medical attention.

Eye contact	First aid not likely required. Flush with water. Consult physician if symptoms persist.
Ingestion	Obtain immediate medical attention. For poison emergency in the US, call 1-800-222-1222

4.2 Most important symptoms and effects, both acute and delayed

No additional information available

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically

Section 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing data	Water spray, dry powder, foam
Unsuitable extinguishing data	None known

5.2 Special hazards arising from the substance or mixture

Burning produces obnoxious and toxic fumes

5.3 Advice for firefighters

As in any fire, wear self-contained breathing apparatus and full protective gear

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment, and emergency procedures

6.1.1 For non-emergency personnel

Sweep up to prevent slipping hazard

6.1.2 For emergency responders

Wear protective gear

6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water systems.

6.3 Methods and material for containment and cleaning up

Clean up promptly with scoop or vacuum. Sweep up and shovel into suitable containers for disposal.

6.4 Reference to other sections

No additional information available

Section 7: Handling and Storage

7.1 Precautions for safe handling

Precautions for safe handling	Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures	Do not eat, drink, or smoke when using this product. Always wash hands after handling the product.

7.2 Conditions for safe storage, including any incompatibles

Store in a well-ventilated place. Keep cool.

7.3 Specific end use(s)

No additional information available

Section 8: Exposure controls/personal protection

8.1 Control parameters

Where reasonably practicable, use local exhaust ventilation and good general extraction. Provide appropriate exhaust ventilation in places where dust is formed.

8.2 Exposure controls

Appropriate engineering controls	Ensure good ventilation of the work station
Hand protection	Protective gloves
Eye protection	Safety glasses
Skin and body protection	Impervious clothing
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment
Environmental exposure controls	Avoid release into the environment

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Solid
Appearance	Monofilament plastic, thin strand
Color	Gray
Odor	Light, sweet odor during processing; none at room temperature
Odor threshold	Not applicable
pH	Not applicable
Melting point	195-225C
Freezing point	Not applicable
Boiling point	Not applicable
Flash point	Not determined
Relative evaporation rate	Not applicable
Flammability	Combustible if heated
Explosion limits	Not applicable
Explosive properties	Not applicable
Oxidizing properties	Not applicable
Vapor pressure	Not determined
Relative density	2.3 g/cc
Relative vapor density at 20C	Not determined
Solubility	Insoluble
Log Pow	Not determined

Log Kow	Not determined
Auto-ignition temperature	300-400C
Decomposition temperature	250C
Viscosity	Not applicable
Viscosity, kinematic	Not applicable
Viscosity, dynamic	Not applicable

9.2 Other information

No other information available

Section 10: Stability and reactivity

10.1 Reactivity

Stable when stored as recommended

10.2 Chemical Stability

Stable when stored/used as recommended

10.3 Possibility of hazardous reactions

None known

10.4 Conditions to avoid

Temperatures above 230C

10.5 Incompatible materials

Oxidizing agents, strong acids, strong bases.

10.6 Hazardous decomposition products

Burning produces obnoxious and toxic fumes. Aldehydes, carbon monoxide, carbon dioxide

Section 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity	None known
Skin corrosion/irritation	Contact with molten material may cause thermal burns
Serious eye damage/irritation	Contact with dust/fumes may cause irritation
Respiratory or skin sensitization	None known
Germ cell mutagenicity	Not determined
Carcinogenicity	Suspected of causing cancer
Reproductive toxicity	Not classified
STOT-single exposure	Not determined
STOT-repeated exposure	Not determined
Aspiration hazard	None known
Endocrine disruptor	None present

Section 12: Ecological information

- 12.1 Toxicity**
Not determined
- 12.2 Persistence and degradability**
Not determined
- 12.3 Bioaccumulative potential**
Not determined
- 12.4 Mobility in soil**
Not determined
- 12.5 Results of PBT and vPvB assessment**
Not applicable
- 12.6 Endocrine disruptor**
None present
- 12.7 Other adverse effects**
No other information available

Section 13: Disposal considerations

13.1 Waste treatment methods

In accordance with local and national regulations. Do not contaminate ponds, waterways, or ditches with chemical or used container. For recycling, contact local waste disposal centers.

Section 14: Transport information

Not regulated under the US Department of Transportation

Section 15: Regulatory information

15.1 US Federal regulations

SARA 313: Listed

IARC: Listed

15.2 International regulations

Components are in compliance and/or are listed

15.3 US State regulations

Prop 65: This product contains a chemical, Nickel powder, which is known to the State of CA to cause cancer.

Right to Know Hazardous Substance List-New Jersey: Listed

Section 16: Other information

Prepared by	Protoplant Inc
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PLA + Steel

Safety Data Sheet

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